

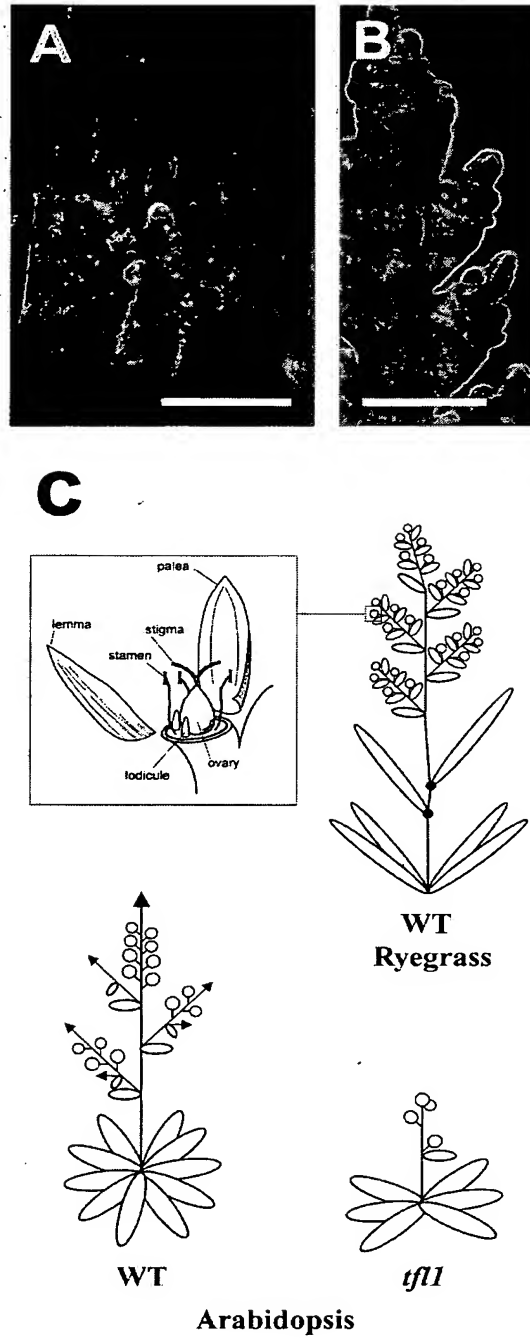
FIGURE 1

FIGURE 2

		GCC	-76
-75	CAAGCCACTTCAAAGCTTTGCTACTACCAGATAGAGCATTCACCGTGCAATATAGAAATACTTGCCTCTCCAACC		-1
1	ATGTCTAGGTCTGTGGAGCCTCTTATTGTTGGTCGTGTCATTGGAGAAGTTCTCGATCCATTTAACCCATGTGTG		75
76	AAGATGGTAGCAACCTATAACTCAAACAAGCTGGTCTTCAATGGTCATGAGCTCTACCCATCAGCAGTTGTATCT		150
151	AAACCAAGAGTAGAGGTTCAAGGGGGTGACTTGCGATCCTTATTCACATTGGTTATGACGGACCCAGATGTGCCA		225
226	GGACCAAGTGATCCGTATCTGCGGGAGCATCTTCACTGGATTGTCAGTAATATACCTGGGACAACAGATGCTTCA		300
301	TTTGGGGGGGAGGTCATGAGCTATGAGAGCCCAAAGCCCAACATTGGAATCCACAGGTTCAATTTTGTGCTCTTC		375
375	AAGCAGAAGCGAAGGCAGACTGTATCTGTGCCTTCCTTCAGGGATCATTTCAACACCCGCCAGTTTGCTGTGGAT		450
451	AATGATCTTGGCCTCCCTGTGGCTGCTGTTTACTTCAATTGTCAGAGAGAGACTGCTGCCAGGAGGCGCTGAAAA		525
526	TCGAGTTCTTGGCTATCCCAGTTGTGCCAAATAAAGGCTTTTGGAGTTATGCACCTTCTTTCTGAAGTCAATGCT		600
601	CCTCTTCTACATTACTTCCTCGTGGACCATTGCTTCTTTACTACAGTTTTTGTCTCAGGGATCAAATAAATCAAGT		675
675	GCATTTTGGAGATTGTATTAGATTATATTGTAAGCAGTGAGATCAGCAACCATGTGTTAACATAAGCCAGTACAT		750
751	TAGCAGGTCCATGTTTATGGTTTCATGTTGTGTGTAAGCAGTTATCACTAGAAAGGAAGGTCAGGTAGACAACCCA		825
826	AACTGGCAAAAAAAGCTTTATCTA		851

FIGURE 3

-3600 cactagtaacggccgcccagtggtggaattcagggttaatacgcactcactatagggmgctcgaggatcttcccac -3526
 -3525 cagtggtgcattcatgtgttacttaccactctccaacttgagggactcaagattggtggggtcctcttttcgctg -3451
 -3450 aagcgatccaaaggtgtcgggtaacgggttatgacagcaaacagaaacatcgccatctgcacggaagccagaagt -3376
 -3375 agttactatgtcaagggtatataaaaaactcactaatgaagggggatgctattgctgagataaaactgctatctca -3301
 -3300 tctacaggtgagattgcaagtatacttgacaacagggccagatgggtatggcatgaagaaaattagggctggagta -3226
 -3225 gaaaggtaagatatgcatggatttggatgagatggctagagggttgcgagatatcaaatagaagacacttcttca -3151
 -3150 atgattcaatagaagatgcatgtgcccattacagatggattattatgtcctttttaaagagatgcttacgtccct -3076
 -3075 gacctttcctataacacaattacactcctttgctagacttttctgctataattgtctttcctcgccaaaagaat -3001
 -3000 aatactatagaacttcttaattttatctcccttattttcttgactctatcttaattctcctcctattgttcag -2926
 -2925 ccaaggactgctccttccatttacttgcgccacgggtgactgacaaatgacacctgcgcgtttgtgatcaagag -2851
 -2850 cctgaatctatttctcacctcatgctgcaatgctccttctcacagcaaatatggtatgatctgcagtaagctc -2776
 -2775 aaccttctgccaatgtatgccagttggcaacgcgagttcagcatttgggttcgcccagctgcccgaacgctcaa -2701
 -2700 ccagccctgcagaagggtgctaaatccatcatcatccttactctctggagattatggaagacgaggaacgatgct -2626
 -2625 atcttcaaaaatctggccccaacagactgccttagttcagtcgactcctagatgaagcctgtcaatggtcgta -2551
 -2550 gccggtgctaaggcgctacgtcagttacctttacatgctagaccctgatggttagccttgatgaggaaactctag -2476
 -2475 gtctaactaagtttagccctgtacagtttttttctcttttctcttttttctcttttctcttttctcttttctgtt -2401
 -2400 tttggtagctttgctactcttgtatgctcccgctctctcgcaggcttcttctaatatataatgacgcatgctttg -2326
 -2325 gcatgtgttcgagaaaaaatttacttacctcttaggctatatctcttccaccaacttgactccacaaagcttc -2251
 -2250 aatcgcaacttgtccaagctgctgccgctggtgctgctgctccttttccaatgcatccatacactgtcctagtacag -2176
 -2175 cataccaaacaaaaagctaattgccgccctgttgtttcaaatgaattatctgattgtgatgctgctaactttt -2101
 -2100 gcatatgagctcgcggcatatgaatgaacttgggttggcagaatgaaacaagagaggacttcttgatggatata -2026
 -2025 cactggtgaagctgaagttctgtgagcaggtatgatgttccccgtgttaaaaaaaggctatgaaaaacttgtgat -1951
 -1950 aggtgttaagattggttttattttgctgcaaatgggtatgcatggaaagtgtgagtgtctagtagctgtgtgtg -1876
 -1875 ctactgtgctaccaacacactgtagcactgccaaaaatttatgaaaaagctgtaaacagacgagatgtatctatca -1801
 -1800 attcatggacctattttgttataatttttcttttaaaaaaattccgtaaagaatcaataagtgaattattg -1726
 -1725 gaaatgaaaaaagtaaccaaaataactaaacttttttcaaatacagatcggatatcatggagacacactggctac -1651
 -1650 cattggttgaatagctactagattccactacagctaggtgtcaagcaactataatggcatcagaatggagcaga -1576
 -1575 aaaatgtcacaaagctgtacttactccactacttctagctgcacaaatgtcaagcaggcatgattgcactagacc -1501
 -1500 agaacatagtaatgcataaagctgtaattggctccactacttatggaaacgaagaaatctatttttattgtttt -1426
 -1425 aatcgagatgaagctgtgataattttatcgctgaaatgacatttcagcactagacagcaccctagacaattaagt -1351
 -1350 ggtggtggcactgtattccattcctttattctcttccatggtgtgttcccatagtagtactacaaagaagagaataa -1276
 -1275 cagataataatggtaatgcacttgggtatcgaaagtttaggaaagatttcaattctagagcaattgaaactcaaca -1201
 -1200 acaacttcccttttcttaacagaaaaaagaatcggtcaaacgaggcttgcctaaaccaaacactataaagacg -1126
 -1125 aacatttgagggtgaagaggcttccacgtggacagtgcgcgatgtttctgtccactagataaacacctaataata -1051
 -1050 gttaaaaaacaagaggataagaatatcagaaagccagaccttaaatcttgcagcaaacatcaaatgaagtatg -976
 -975 caaaaacgaattgatagtttaggaaagcatcactccaaagtgttttattcccggttcttttctattgtctccaca -901
 -900 gggcatacttctaaatttctgcgaacaattacatctagatctttttaaactgaagtatttttagcatgaaaacg -826
 -825 cattgttctgtaattgtggtgtgaatttcgactgctcatctgatttccctctggtagaatacataaataattat -751
 -750 acacaacagcatgataatgtgcaaaactaagcatcaaaatctgcacattgtcatgcagaaactaggacaggagga -676
 -675 ccagcactttgtcggttcttaaccaatattaacatagttcagcaacataatcttcagagaccactagcatga -601
 -600 aggtgtgttatgtttcctaaagaataacatgtaggtagtgatctacaataccttttttggggactataaggtgg -526
 -525 gaaaccatcaacttgaaaaggtttccatttaatacaagtaaaaaaacagtattttttaactatcaataactaaaa -451
 -450 ttaaaacagaatagagatatataactaacaatgaaaatcaaacagttgtgcaaatgtatttatcgtagttagtatct -376
 -375 catgtttctggtgaaaaaattctctgcccttagaacttggaaagatgcatgaagtattactccaaactccaac -301
 -300 actgtgcaactgatagaaaagaacaagaccttgggttggtgtctcggaaaaagtggttaggtcctttctgtgg -226
 -225 ccttttcagttctttccacgcataaccaacaaaaaagaacacagatactactcatgtctcacattctcttttga -151
 -150 gcttacactcgaagcaggcttcttgccctataagtagaggctcgtcgtactctagcaatgctcagtaagcaGCC -76
 -75 CAAGCCACTTCAAAGCTTTGCTACTACCAGATAGAGCATTCACCGTGCAATATAGAAATACTTGCCCTCTCCAAACC -1
 1 ATGTCTAGGTCTGTGGAGCCTCTTATTGTTGGTTCGCTGTCATTGGAGAAGTTCTCGATCCATTAAACCCATGTGTG 75
 76 AAGATGGTAGCAACCTATAACTCAAACAAGCTGGTCTTCAATGGTCATGAGCTCTACCCATCAGCAGTTGTATCT 150
 151 AAACCAAGAGTAGAGGTTTCAGGGGGTGACTTGGCATCCTTATTACATTGgtagaatgcactcgactcgatcctt 225
 226 ggaactccatattcaacttcgagtattgtatgcttgttttcttcttctcgcagtgccataattattcatatttca 300
 301 gGTTATGACGGACCCAGATGTGCCAGGACCAAGTGATCCGTATCTGCGGGAGCATCTTCACTGGTaaacctttctc 375
 375 atgcacagtttttctgctgggtggctactaagcacctaaatatattagatatatttttttgaaggaaaaatatat 450

451	tagtatatgttgctaaggaatatagaagtacatcttcttcttgacatatatagacagagagactattttaatag	525
526	cacttctaacgagagtcatttaccataccttttacacttacacaggATTGTCAGTAATATACCTGGGACAACAG	600
601	ATGCTTCATTTGGtaggtccttctctgagatttgaattggtatattctatgttctgcattttgaatgaataacca	675
675	ctgaccttttgaattgcaggGGGGGAGGTCATGAGCTATGAGAGCCCAAAGCCCAACATTGGAATCCACAGGTTT	750
751	ATTTTTGTGCTCTTCAAGCAGAAGCGAAGGCAGACTGTATCTGTGCCTTCCTTCAGGGATCATTTCAACACCCGC	825
826	CAGTTTGCTGTGGATAATGATCTTGGCCTCCCTGTGGCTGCTGTTTACTTCAATTGTCAGAGAGAGACTGCTGCC	900
901	AGGAGGCGCTGAAAAATCGAGTTCTTGGCTATCCCAGTTGTGCCAAATAAAGGCTTTTGGAGTTATGCACCTTCTT	975
976	TCTGAAGTCAATGCTCCTCTTCTACATTACTTCCTCGTGGACCATTGCTTCTTTACTACAGTTTTTGCTCAGGGA	1050
1051	TCAAATAAATCAAGTGCAATTTTGGAGATTGTATTAGATTATATTGTAAGCAGTGAGATCAGCAACCATGTGTTAA	1125
1126	CATAAGCCAGTACATTAGCAGGTCCATGTTTATGGTTTCATGTTGTGTGTAAGCAGTTATCACTAGAAGGAAGGT	1200
1201	CAGGTAGACAACCCAAACTGGCAAAAAAAAAAGCTTTATCTActgtatggcccttgccggcttgatgttccatgc	1275
1276	accttttctgacatgctgtctactgtatgccaccgccactataatgtatgagatatgaatataaaatggagatat	1350
1351	ccaaaatatccagatgattgcccactaaatgctaaatgtacatagtggggtttccacctattttgacttcatcat	1425
1426	gtccttacacaaaatcagaaaacatccatttcatgcacattgatgcacactgcatattaacaatctattcagatt	1500
1501	tggtgtaaacacacccttattttccgcatccattaatattatatttagtaccctggacaggttaagcttttgcag	1575
1576	cacagtaagtaaccggatgaaattacaatatgatcctcgagcgccctat	1624

FIGURE 4

1	MSRSVEPLIVGRVIGEVLDPFNPCVKMVATYNSNKLVFNGHELYPSAVVSKPRVEVQGGDLRLSLFTLVMTDPDVP	75
76	GPSDPYLRHLHWIVSNIPGTTDASFGGEVMSYESPKPNIGIHRFIFVLFKQRRQT VSVPSFRDHFNTRQFAVD	150
151	NDLGLPVAAVYFNCQRETAARRR	173

FIGURE 5

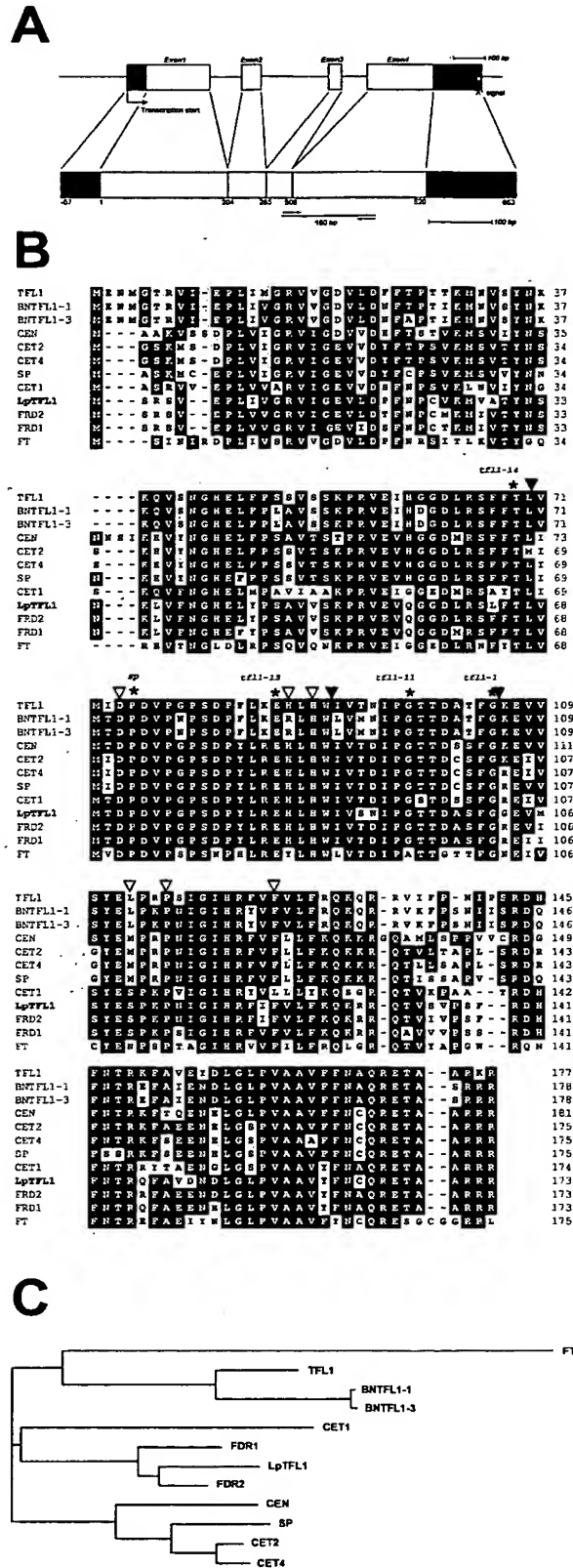


FIGURE 6

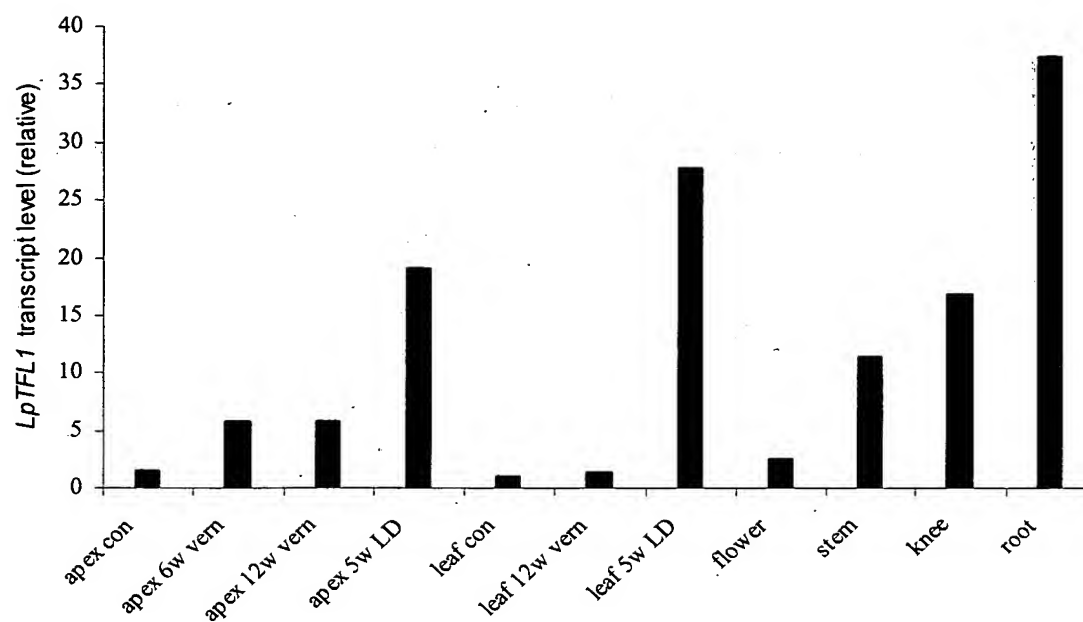


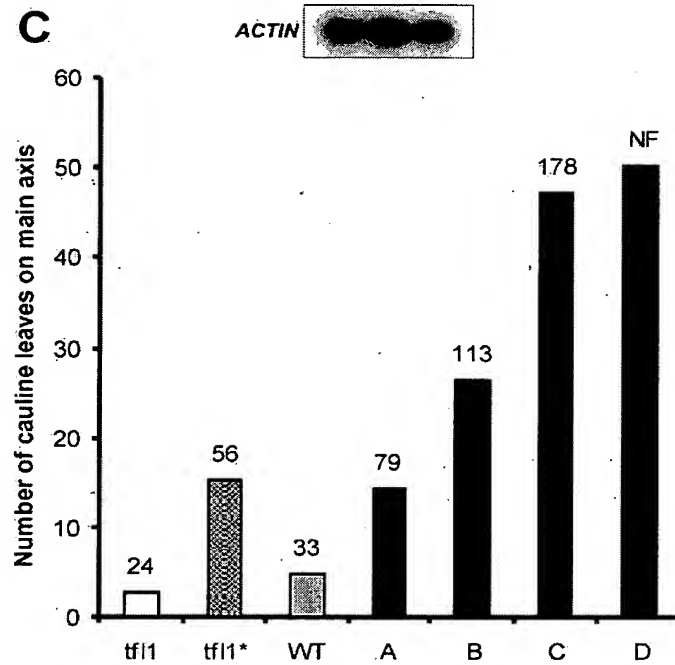
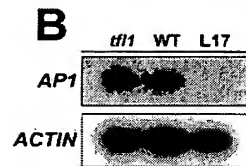
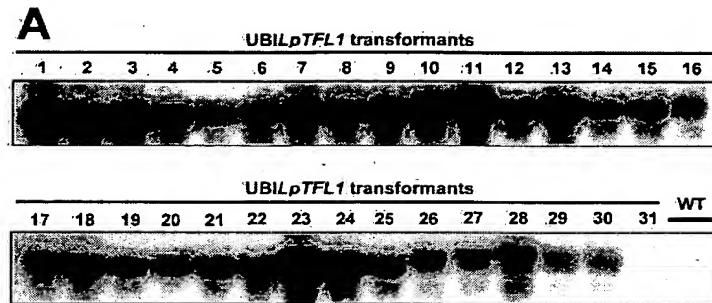
FIGURE 7

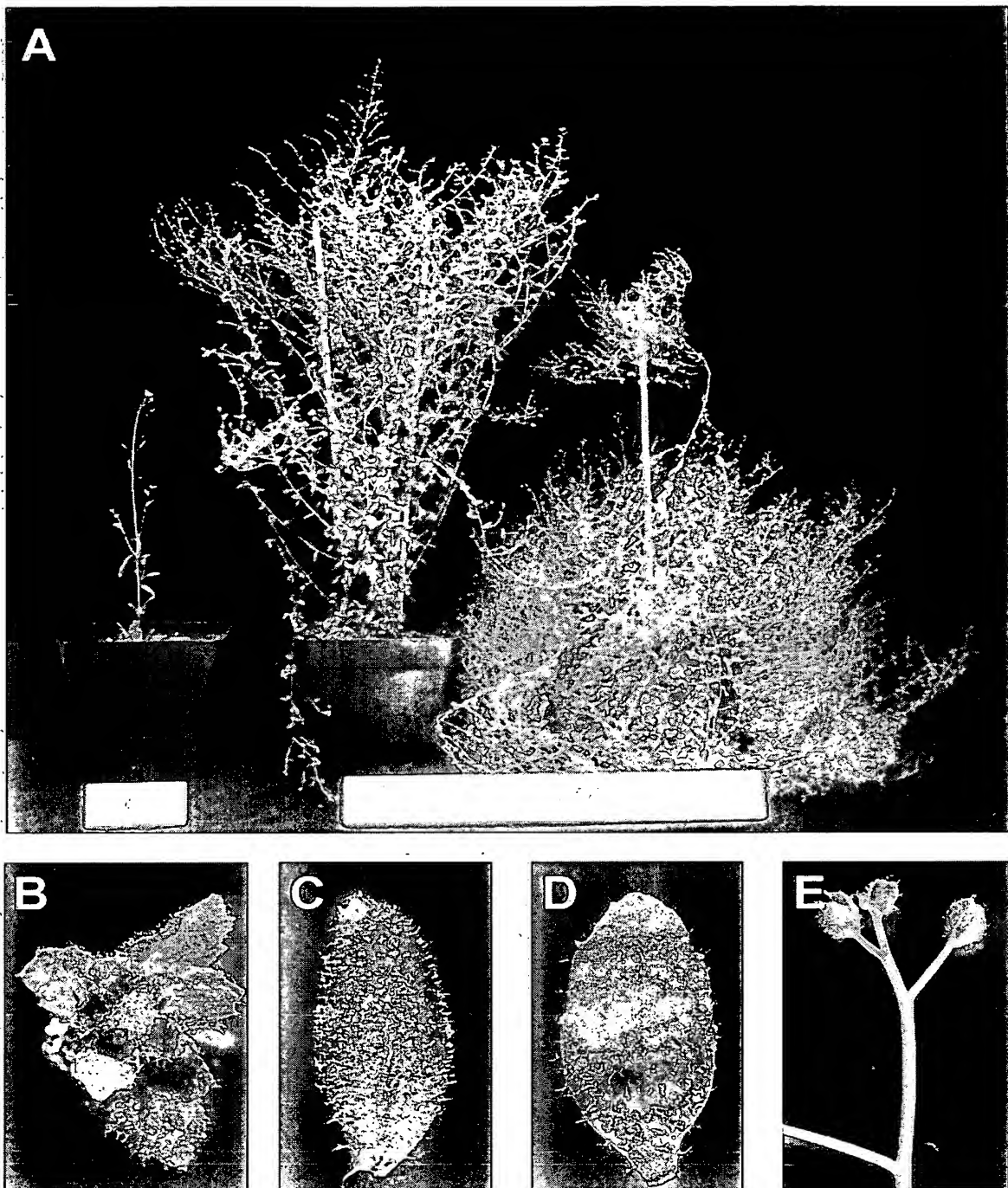
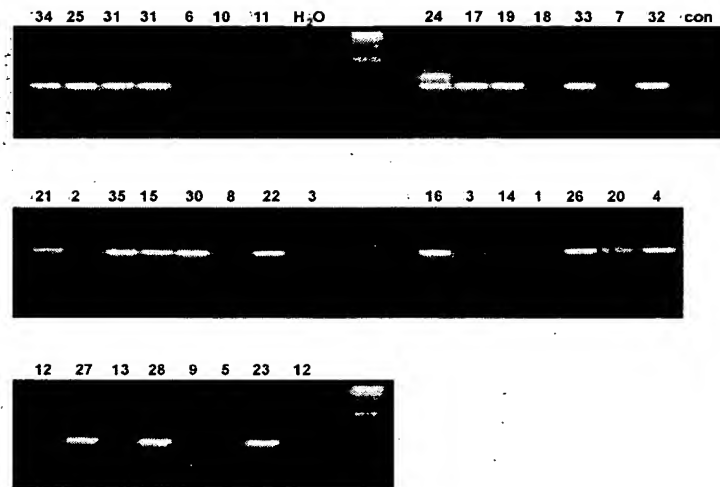
FIGURE 8

FIGURE 9

10/507355

10/15

FIGURE 10

FIGURE 11

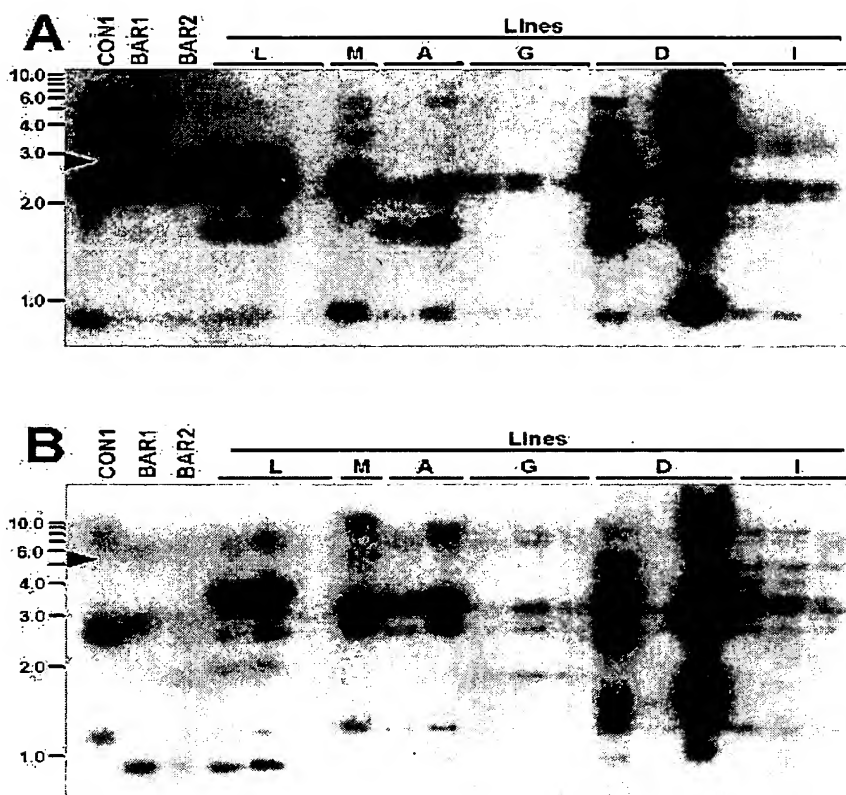


FIGURE 12

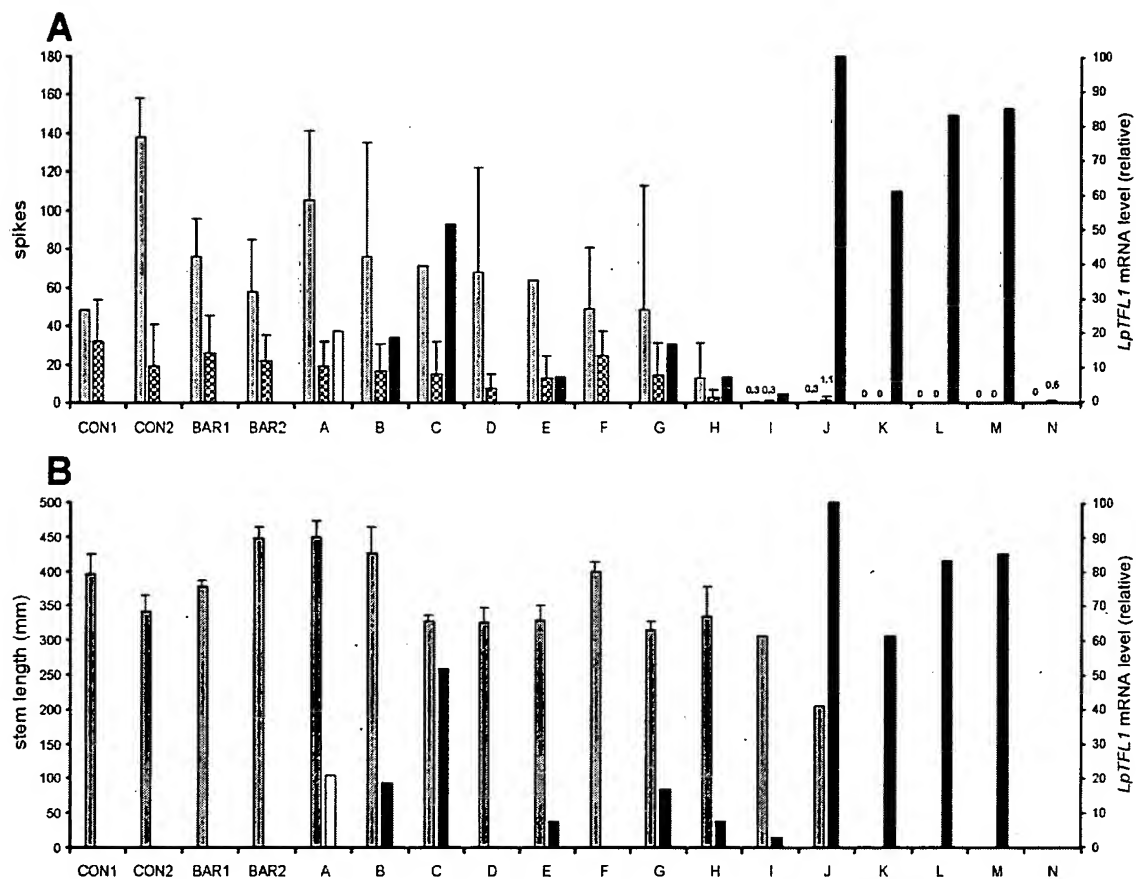


FIGURE 13

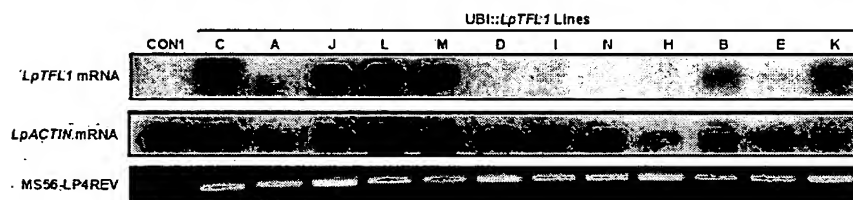


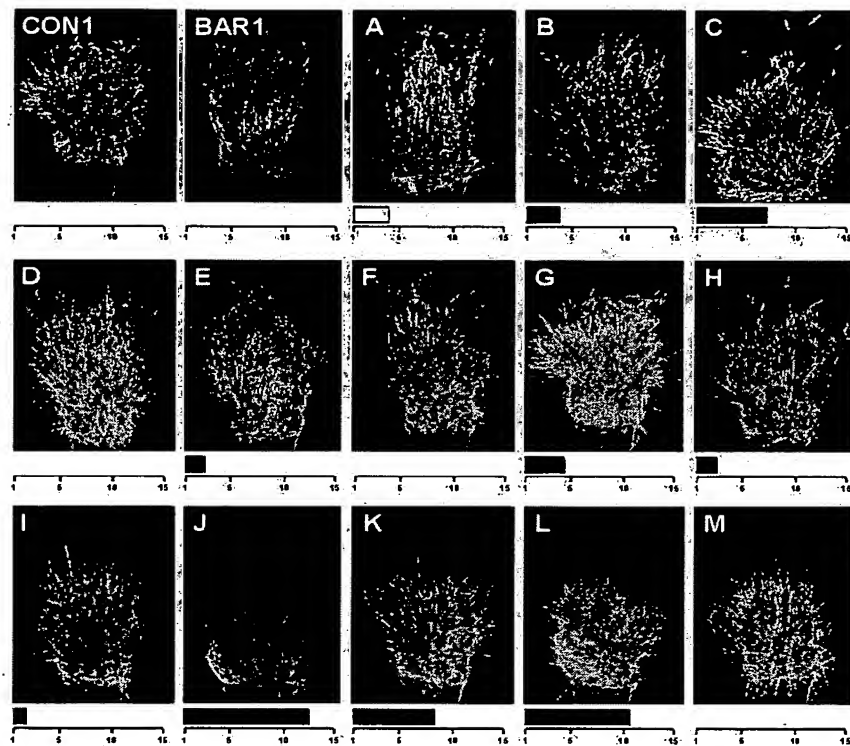
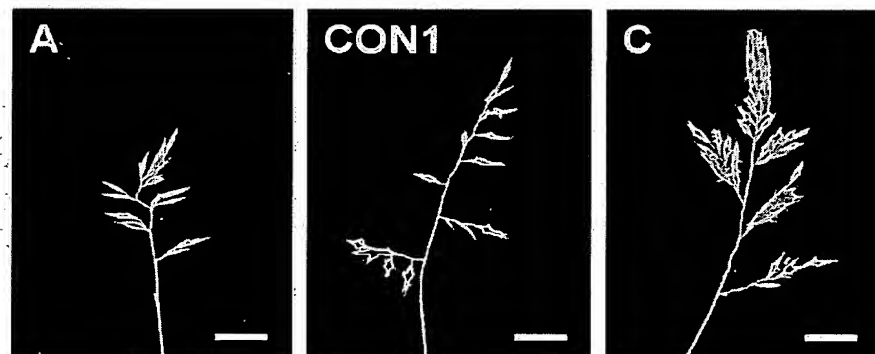
FIGURE 14**FIGURE 15**

FIGURE 16: *Transformation Efficiency and Floral Activity of the Transformants*

Cultivar	Line No.	Inflorescences	PCR	RT-PCR
F6	CON	8	-	-
F6	7	18	-	-
F6	8	11	-	-
F6	17	5,3	+	-
F6	18	13,3	+	-
F6	24	12	+	+
F6	29	0	+	+
F6	32	0	+	+
F6	33	4	+	+
F6	36	0	+	+
ACTION	2	1,8	-	-
ACTION	5	3	-	-
ACTION	9	0,3	-	-
ACTION	12	2	-	-
ACTION	13	0	-	-
ACTION	16	0	+	-
ACTION	19	7,3	+	-
ACTION	21	4	+	+
ACTION	22	0,3	+	+
ACTION	23	0	+	+
ACTION	25	0,3	+	+
ACTION	27	0	+	+
ACTION	28	4	+	+
ACTION	31	0	+	+
ACTION	34	0	+	+
ACTION	35	0	+	+
TELSTAR	1	10	-	-
TELSTAR	3	1	-	-
TELSTAR	4	11,6	-	-
TELSTAR	6	10,8	-	-
TELSTAR	10	5	-	-
TELSTAR	11	3,8	-	-
TELSTAR	14	0	-	-
TELSTAR	15	3,8	+	-
TELSTAR	20	3,5	+	-
TELSTAR	26	0	+	+
TELSTAR	30	3,7	+	+

Figur 17: Transgene integration analysis by PCR using different primer combinations

Primer combination

UBI promoter

UBI

intron

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

UBI

^aplus indicates that the observed fragment had the expected size, whereas numbers indicate that the fragment size deviated from the expected size (numbers in bold), blank field indicates that no PCR-product was detected; E, *EcoRI*; H, *HindIII*

10/507355